



**S/N 10/081,439**

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Kie Y. Ahn et al.

Examiner: Douglas A. Wille

Serial No.: 10/081,439

Group Art Unit: 2818

Filed: February 20, 2002

Docket: 1303.046US1

Title: EVAPORATED LAAIO3 FILMS FOR GATE DIELECTRICS

---

**COMMUNICATION CONCERNING RELATED APPLICATION(S)**

MS RCE

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Applicants would like to bring to the Examiner's attention the following related application(s) in the above-identified patent application:

<u>Serial/Patent No.</u>	<u>Filing Date</u>	<u>Attorney Docket</u>	<u>Title</u>
09/944981	August 30, 2001	1303.021US1	CRYSTALLINE OR AMOPHOUS MEDIUM-K GATE OXIDES, Y2O3 AND Gd2O3
09/945535	August 30, 2001	1303.026US1	HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXIDE ZrO2
10/028643	December 20, 2001	1303.030US1	LOW-TEMPERATURE GROWN HIGH QUALITY ULTRA-THIN CoTiO3 GATE DIELECTRICS
10/052983	January 17, 2002	1303.031US1	HIGHLY RELIABLE AMORPHOUS HIGH-k GATE DIELECTRIC ZrOxNy
10/027315 6740581	December 20, 2001	1303.033US1	LOW-TEMPERATURE GROWN HIGH-QUALITY ULTRA-THIN PRASEODYMIUM GATE DIELECTRICS
10/099194	March 13, 2002	1303.044US1	EVAPORATION OF Y-Si-O FILMS FOR MEDIUM-k DIELETRICS
10/137499	May 2, 2002	1303.050US1	ATOMIC LAYER-DEPOSITED LaAlO3 FILMS FOR GATE DIELETRICS
10/163481	June 5, 2002	1303.056US1	ATOMIC LAYER-DEPOSITED HfAlO3 FILMS FOR GATE DIELECTRICS

10/163686	June 5, 2002	1303.059US1	Pr2O3-BASED La-oxide GATE DIELECTRICS
10/209581	July 30, 2002	1303.061US1	ATOMIC LAYER DEPOSITED NANOLAMINATES OF HfO2/ZrO2 FILMS AS GATE DIELECTRICS
10/219870	August 15, 2002	1303.069US1	LANTHANIDE DOPED TiOx DIELECTRIC FILMS BY PLASMA OXIDATION
10/219878	August 15, 2002	1303.070US1	LANTHANIDE DOPED TiOx DIELECTRIC FILMS
10/229903	August 28, 2002	1303.078US1	ATOMIC LAYER DEPOSITED HfSiON DIELECTRIC FILMS
10/233309	August 29, 2002	1303.079US1	ATOMIC LAYER DEPOSITED LANTHANIDE DOPED TiOx DIELECTRIC FILMS
10/309583	December 4, 2002	1303.082US1	ATOMIC LAYER DEPOSITED ZR-SN- TI-O FILMS USING TiH4
10/309935	December 4, 2002	1303.083US1	ATOMIC LAYER DEPOSITED Zr-Sn- Ti-O FILMS
10/379470	March 4, 2003	1303.090US1	ATOMIC LAYER DEPOSITED DIELECTRIC LAYERS
10/403734	March 31, 2003	1303.092US1	ATOMIC LAYER DEPOSITED ZrAlxOy DIELECTRIC LAYERS
10/420307	April 22, 2003	1303.097US1	ATOMIC LAYER DEPOSITED ZrTiO4 FILMS
10/602323	June 24, 2003	1303.101US1	LANTHANIDE OXIDE / HAFNIUM OXIDE DIELECTRIC LAYERS
10/602315	June 24, 2003	1303.107US1	LANTHANIDE OXIDE / HAFNIUM OXIDE DIELECTRICS
09/779959	February 9, 2001		

COMMUNICATION CONCERNING RELATED APPLICATIONS

Serial Number: 10/081,439

Filing Date: February 20, 2002

Title: EVAPORATED LAAIO3 FILMS FOR GATE DIELECTRICS

Page 3

Dkt: 1303.046US1

09/838335	April 20, 2001		
09/881408	June 13, 2001		
09/908767	July 18, 2001		
10/765619	January 27, 2004	1303.033US2	LOW-TEMPERATURE GROWN HIGH-QUALITY ULTRA-THIN PRASEODYMIUM GATE DIELECTRICS
10/768597	January 30, 2004	1303.033US3	LOW-TEMPERATURE GROWN HIGH-QUALITY ULTRA-THIN PRASEODYMIUM GATE DIELECTRICS
10/789042	February 27, 2004	1303.050US2	ATOMIC LAYER-DEPOSITED LaAlO3 FILMS FOR GATE DIELECTRICS
10/789044	February 27, 2004	1303.070US2	LANTHANIDE DOPED TiOx DIELECTRIC FILMS

Respectfully submitted,

KIE Y. AHN ET AL.

By Applicants' Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

P.O. Box 2938

Minneapolis, MN 55402

(612) 371-2157

Date 17 June 2004 By David R. Cochran  
David R. Cochran  
Reg. No. 46,632

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 17th day of June, 2004.

Name Amy Moriarty

Signature Amy Moriarty

S/N 10/081,439

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Kie Y. Ahn et al.	Examiner:	Douglas A. Wille
Serial No.:	10/081,439	Group Art Unit:	2818
Filed:	February 20, 2002	Docket:	1303.046US1
Title:	EVAPORATED LaAlO <sub>3</sub> FILMS FOR GATE DIELECTRICS		

INFORMATION DISCLOSURE STATEMENT

MS RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement.

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

KIE Y. AHN ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
P.O. Box 2938  
Minneapolis, MN 55402  
(612) 371-2157

Date 17 June 2004

By David R Cochran  
David R. Cochran  
Reg. No. 46,632

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 17th day of June, 2004.

Name

Amy Moriarty

Signature

[Signature]

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)



Complete if Known

Application Number 10/081,439

Filing Date February 20, 2002

First Named Inventor Ahn, Kie

Group Art Unit 2818

Examiner Name Wille, Douglas

Sheet 1 of 1

Attorney Docket No: 1303.046US1

**US PATENT DOCUMENTS**

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
	US20020111001	08/15/2002	Ahn, Kie Y., et al.	438	592	02/09/2001
	US20040033701A1	02/19/2004	Ahn, K. Y., et al.	438	785	08/15/2002
	US-4,058,430	11/15/1977	Suntola, T. , et al.	427	255.13	11/25/1975
	US-4,725,877	02/16/1988	Brasen, Daniel , et al.	257	751	04/11/1986
	US-6,537,613	03/25/2003	Senzaki, Y. , et al.	427	250	04/10/2000
	US-6,639,267	10/28/2003	Eldridge, Jerome M.	257	310	07/29/2002
	US-6,660,660	12/09/2003	Haukka, S. P., et al.	438	778	08/31/2001
	US-6,713,846	03/30/2004	Senzaki, Y.	257	635	01/25/2002
	US-6,730,575	05/04/2004	Eldridge, Jerome M.	257	310	08/30/2001

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T <sup>2</sup>
--------------------	---------------------	------------------	---	-------	----------	----------------

**OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
--------------------	----------------------	---	----------------

**EXAMINER****DATE CONSIDERED**

Substitute Disclosure Statement Form (PTO-1449)

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional) <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached